
STATE OF INDIANA

DEPARTMENT OF LOCAL GOVERNMENT FINANCE



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TO: Assessing Officials

FROM: Barry Wood, Assessment Division Director

RE: 2015 Ratio Study Guidance

DATE: February 11, 2015

The purpose of this memorandum is to provide guidance to assessing officials regarding changes in the Department of Local Government Finance's ("Department") ratio study review process for the 2015 assessment year. This guidance is similar to last year's, but with a few minor changes. Section One describes the 2015 ratio study process in conjunction with the 2015 annual adjustment ("trending") process and the first phase of the cyclical reassessment. Section II details the ratio submission format. This format is described in more detail in the attached 2015 Ratio Study Format document.

I. 2015 Annual Adjustment

As in prior years, the Department requires each county assessor to have an approved ratio study prior to submitting 2015 certified assessed values to the county auditor. Per IC 6-1.1-5-14, the county assessor must deliver the real estate book (i.e., roll 2015 pay 2016 gross assessed values and balance) to the county auditor by July 1, 2015. Although there is no statutory date for submission of the county's ratio study, **to ensure on-time billing for 2015 pay 2016, it is highly recommended the ratio study be submitted by May 1, 2015.** Additionally, a county's ratio study will not be reviewed until all datasets are compliant, particularly the Sales Disclosure Data File (50 IAC 27-9-1).

Like last year, the Department will forward a copy of the approved sales file to the county that will be used in the review of the ratio study. It is hoped that this will continue to facilitate an efficient review and comparison when sales are questioned.

As part of the annual adjustment process, values in the ratio study are set using local market data, such as the sale price of comparable properties. **If necessary, further adjustment based on local market data ("trending") may be performed to meet ratio study standards. However, the purpose of the 2015 annual adjustment process is to value properties at their market value-in-use, as indicated by compliance with ratio study standards. If this goal is met without trending, no further adjustment is necessary.**

RATIO STUDY SUBMISSION BY COUNTY

It is highly recommended that the county conduct an internal ratio study before submitting its ratio study to the Department. If an internal ratio study is completed, please forward a copy to the Department. A narrative detailing the county's annual adjustment process, including information about the county's cyclical reassessment activity, as well as a "Workbook," should be included with the county's ratio study submission. The "Workbook" should contain data for each parcel of real property (e.g., state-assigned parcel number, prior year land AV, current year land AV, prior year improvement AV, current year improvement AV, proposed adjustment ["trending"] factor [2 columns – one for land, one for improvements], etc.). In order to differentiate parcels that were subject to the cyclical reassessment and the annual adjustment, a new/separate column should be established indicating whether or not a parcel was part of the first phase of the cyclical reassessment (i.e., "yes" or "no"). An example of a sample "Workbook," including the additional column, can be found at http://www.in.gov/dlgf/files/Sample_Workbook.xls. **Ratio studies will not be reviewed until a complete and compliant file is submitted.**

ASSESSMENT DATE AND VALUATION DATE

- The assessment and valuation date are both March 1, 2015. All real property should reflect characteristics as of this date.
- Depreciation should also be applied relative to March 1, 2015, and updated on an annual basis. If an adjustment is necessary, and depreciation has not been updated as part of the annual adjustment process, the adjustment factor may need to be revised to take into account increased depreciation from the 2012 General Reassessment.
- **Note: The cost tables were updated for the March 1, 2015 assessment date (see <http://www.in.gov/dlgf/2489.htm>) and all improvements should be assessed with the updated cost schedules.**

PARCEL CHARACTERISTICS

All properties must be assessed based on their characteristics as of March 1, 2015.

RATIO STUDY REVIEW STANDARDS

The Department will review all ratio studies for the 2015 annual adjustment according to the guidelines set forth in the 2007 *IAAO Standard on Ratio Studies*. The 2015 ratio study review process is unchanged from the Department's guidance on sales review and ratio study analysis for 2011 – see [http://www.in.gov/dlgf/files/110111 - Wood Memo - 2011 Ratio Study Review Process and Annual Adjustment Guidance.pdf](http://www.in.gov/dlgf/files/110111_-_Wood_Memo_-_2011_Ratio_Study_Review_Process_and_Annual_Adjustment_Guidance.pdf).
Sales Window:

The assessing official must use sales of properties from the period of time from January 1, 2014 to March 1, 2015 for the March 1, 2015 assessment date (see the 2011 [*sic* 2012] Real Property

Manual – http://www.in.gov/dlgf/files/Adopted_2011RealPropertyAssessmentManual.pdf). A longer time period may be required to produce a representative sample in some counties; however, no more than five years of sales may be used in the ratio study. Older sales must be time-adjusted if appropriate and in accordance with methods prescribed in the *2007 IAAO Standard on Ratio Studies*.

Multiple Sales Years:

Similar to the 2014 assessment process, counties may use sales older than one year in one township without expanding the sales window for other townships. However, time adjustments for older sales must be performed using all comparable older sales, including those sales whose inclusion in the ratio study is not necessary because of sufficient current sales. This will promote equity among townships with different sales windows without requiring the addition of older sales in townships where they are not needed for assessment purposes.

For example, Adams Township has sufficient 2014 sales, but Boone Township does not. The sales window is expanded to 2013 sales for Boone Township. The county does not need to expand the sales window to 2013 sales for Adams Township. However, the county should use comparable 2013 and 2014 sales from both Adams and Boone Townships to determine whether a time adjustment is necessary for the 2013 sales used in Boone Township.

Sales Chasing:

Appendix D of the *2007 IAAO Standard on Ratio Studies* lists four methods that oversight agencies may use to detect sales chasing. Of these, the Department primarily uses the Mann-Whitney test outlined in D.1: Comparison of Average Value Changes. In *Mass Appraisal of Real Property*, Robert Gloudemans notes that:

When calculating average value changes, new parcels and parcels that have undergone a change in use or physical change (such as additions or renovations) should be excluded (pp. 311 – 312).

Because 2014 marked the first phase of the cyclical reassessment, it may be difficult to discern between changes attributable to the reassessment process and changes attributable to sales chasing (hence the need for the additional column in the Workbook to designate whether a parcel was reassessed in the first phase of the cyclical reassessment). The Mann-Whitney test will be utilized for the 2015 annual adjustment process for detecting sales chasing. However, parcels that were part of the first phase of the cyclical reassessment (as identified in the Workbook) will be excluded from analysis. Additionally, the Department may use other methods described in Appendix D to detect sales chasing.

II. Ratio Study Format

The ratio study format is fully described in the attached memorandum. The format itself is unchanged from 2014.

As in prior years, ratio studies must be submitted in a spreadsheet compatible with Microsoft Excel 2007. The spreadsheet must contain one tab with ratio study data for each of the following types of property:

- Industrial Vacant
- Industrial Improved
- Commercial Vacant
- Commercial Improved
- Residential Vacant
- Residential Improved

In addition, the study should contain a *Summary* tab detailing the number of sales used and ratio statistics in each section of the ratio study.

For the 2015 annual adjustment, all ratio studies submitted to the Department must also include two additional tabs. The first tab is called *Formatted*. This tab must contain the ratio study data located in the other six tabs in a format readable by the SPSS software program. This format is fully described in the attached memorandum. This formatting can be done in Excel or another program. **Note: The SPSS software program is not needed to produce the formatting.**

Because of the way the SPSS software reads the data, only one parcel from a multi-parcel sale can be included in the *Formatted* tab. To fix this, the ratio study should also include a second tab called *MultiParcelSales*. This tab will list all the data for each parcel in each multi-parcel sale included in the *Formatted* tab.

Adding these tabs will make the review process more efficient and should result in a faster approval time. In 2014, the average approval time for a ratio study (after data compliancy and a complete file was submitted) was 7.77 days. While calculating ratio statistics by hand is time-consuming, a software program like SPSS can perform these calculations very quickly. Listing multi-parcel sales in a separate tab will also make it easier to reconcile the sales used in the ratio study with the sales disclosure data reviewed by the Data Division.

The ratio study format is described in detail in the attached document.

Questions about this memorandum may be directed to Barry Wood, Assessment Division Director, at bwood@dlgf.in.gov or (317) 232-3762, or David Schwab, Senior Statistician/Application System Analyst, at dschwab@dlgf.in.gov or (317) 234-5861.